

### **REMARKS**

This amendment is a full and timely response to the Office Action dated August 22, 2003. By this amendment, Applicants have amended the specification to correct a typographical error and make the specification consistent with the drawings. No new matter has been added. Claims 3-6 are pending, where claims 3 and 4 are independent.

#### **Objection to the Specification**

The specification was objected to for an alleged incorrect label designation. Applicants have amended the specification in a manner that addresses and remedies this objection. In particular, Applicants have amended the specification at page 38, line 18 to read "the silicon oxide film 312." Accordingly, Applicants respectfully request that the objection to the specification be withdrawn.

#### **Rejections Under 35 U.S.C. § 102**

Claims 3-6 were rejected under 35 U.S.C. § 102 as anticipated by *Applicants' Alleged Admitted Prior Art Fig. 3*. Applicants respectfully traverse this rejection.

Independent claim 3 recites a semiconductor device comprising, a conductive layer pattern formed on a substrate; a first inter-layer insulating film which covers said conductive layer pattern and is formed on said substrate; a first connection hole formed in a upper layer of said first inter-layer insulating film above said conductive layer pattern; a second connection hole which reaches said conductive layer pattern from the bottom portion of said first connection hole and then has a smaller diameter than that of said first connection hole and formed on said first inter-layer insulation film; a plug having conductivity and filling internal portions of said first connection hole and said second connection hole; a second inter-layer insulating film formed on said first inter-layer insulating film, wherein said second inter-layer insulating film includes up to five layers; a third connection hole which reaches said plug and is formed through said second inter-layer insulating film; and a conductive portion which is connected to said plug and formed in said third connection hole.

Independent claim 4 recites a semiconductor device, comprising a conductive layer pattern formed on a substrate; a first inter-layer insulating film which covers said conductive

layer pattern and is formed on said substrate; a first connection hole formed in a upper layer of said first inter-layer insulating film above said conductive layer pattern; a second connection hole which reaches said conductive layer pattern from the bottom portion of said first connection hole and then has a smaller diameter than that of said first connection hole and formed on said first inter-layer insulation film; a plug having conductivity and filling internal portions of said first connection hole and said second connection hole, wherein the upper surface of said plug is formed to almost the same height as the surface height of said first inter-layer insulating film; a second inter-layer insulating film formed on said first inter-layer insulating film, wherein said second inter-layer insulating film includes up to five layers; a third connection hole which reaches said plug and is formed through said second inter-layer insulating film; and a conductive contact portion which is connected to said plug and formed in said third connection hole.

*Fig. 3* illustrates a sectional view of the COP type DRAM cell shown in *Fig. 2* taken along line A-A'. The Office Action alleges that claims 3 and 4 do not overcome *Applicants' Alleged Admitted Prior Art* because *Fig. 3* shows a second interlayer insulating film having only five layers. Applicants submit that *Fig. 3* does not include every layer shown in *Fig. 17* because line A-A', which is the line along which *Fig. 3* is cut, passes through node contacts 54a and 54c. In other words, *Fig. 3* illustrates a view of the COB type DRAM cell as seen through a pair of the polyplugs 136.

*Fig. 17* also illustrates a sectional view of the DRAM cell shown in *Fig. 2*, but taken along line B-B'. *Fig. 17* illustrates the last step in a method of manufacturing the COB type DRAM cell shown in *Fig. 2*. Moreover, *Fig. 17* shows that, as a result of the manufacturing method the DRAM cell includes a contact hole formed through the polysilicon film 140, the silicon nitride film 164, the BPSG film 163, the NSG film 162, the silicon nitride film 161, the silicon oxide film 160, the silicon nitride film 158, and silicon oxide film 157. As shown in *Fig. 2*, line B-B' (*Fig. 17*) is cut diagonally lengthwise from a first end of the DRAM cell to a second end, and line A-A' (*Fig. 3*) is cut widthwise from one side of the DRAM cell to the other. Additionally, *Fig. 2* shows that lines A-A' and B-B' intersect at node contact 54a, such that a portion of the view of *Figs. 3* and *17* overlap. To further illustrate this point, Applicants have enclosed a highlighted copy of *Fig. 17*.

In the highlighted copy of Fig. 17, the portion highlighted in yellow corresponds to the portion of Fig. 2 that was cut-off by line A-A' (*Fig. 3*). The portion highlighted in orange corresponds to the view from which *Fig. 3* depicts the device. The second interlayer insulating film in the yellow highlighted portion includes up to six layers, whereas the node contact in the orange highlighted portion includes up to five layers. Fig. 17 further shows that the second interlayer insulating film includes six layers on the side of the polyplug 144 that is opposite the node contact. Because the node contact is not the second interlayer insulating film, Applicants submit that the assertion of the Office Action is incorrect, in that *Fig. 3* does not show that the second interlayer insulating film includes up to five layers.

To properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. See Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Because *Applicants' Alleged Admitted Prior Art* does not disclose, teach, or suggest every claim element recited in claims 3 and 4, it follows that *Fig. 3* fails to anticipate these claims. Thus, Applicants respectfully request that the rejection of claims 3 and 4 under 35 U.S.C. §102 be withdrawn, and claims 3 and 4 be allowed.

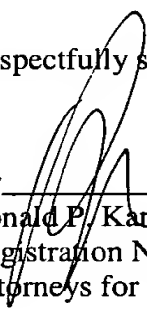
Claim 5 depends from claim 3 and claim 6 depends from claim 4. By virtue of this dependency, Applicant submits that claims 5 and 6 are allowable for at least the same reasons given above. Moreover, claims 5 and 6 are further distinguished over *Fig. 3* by the additional features recited therein, and particularly within each respective claimed combination.

**Conclusion**

Based on at least the foregoing amendments and remarks, Applicants submit that claims 3-6 are allowable, and this application is in condition for allowance. Accordingly, Applicants request favorable reexamination and reconsideration of the application. In the event the Examiner has any comments or suggestions for placing the application in even better form, Applicants request that the Examiner contact the undersigned attorney at the number listed below.

Dated: November 6, 2003

Respectfully submitted,

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